FLOYD COUNTY

(Floyd County Water Service Area Map)

- Estimated 1999 population of 42,800--68% on public water
- Estimated 2020 population of 42,000--87% on public water
- 385 miles of water lines, with plans for 180 additional miles
- Estimated funding needs for public water 2000-2005--$10,200,000
- Estimated funding needs for public water 2006-2020--$10,000,000

Floyd County had an estimated population of 42,790 (16,683 households) in 1999. Approximately 68% of the residents are served by public water systems. The remainder rely primarily on wells. It is projected that the population of Floyd County will be 41,920 (18,015 households) in the year 2020. Proposed water line extensions in the period 2000-2020 will serve another 3,490 residents.

ESTIMATED COSTS - PROPOSED PROJECTS, 2000-2005

COUNTY/System		New Customers	Cost	Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	in $1000	in $1000	in $1000	in $1000	in $1000	in $1000
FLOYD								-
Auxier (private)	4.2	37	210				150	360
Beaver Elkhorn	24	744	1,200	3,000				4,200
Martin							300	300
Mudcreek W/D				1,000				1,000
Prestonsburg	26	945	1,300		1,000		500	2,800
Sandy Valley W/D	12	2	600	500			300	1,400
Wheelwright	2	65	100					100
Total	**68.2**	**1793**	**3,410**	**4,500**	**1,000**		**1,250**	**10,160**

ESTIMATED COSTS - PROPOSED PROJECTS, 2006-2020

COUNTY/System		New Customers	Cost	Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	in $1000	in $1000	in $1000	in $1000	in $1000	in $1000
FLOYD								-
Auxier (private)								-
Beaver Elkhorn	40	630	2,000		500		500	3,000
Martin								-
Mudcreek W/D	14	246	700					700
Prestonsburg	57	820	3,000	200			1,000	4,200
Sandy Valley W/D						2,000		2,000
Wheelwright					100			100
Total	**111**	**1696**	**5,700**	**200**	**600**	**2,000**	**1,500**	**10,000**

WATER SERVICE AREAS
FLOYD COUNTY
Kentucky

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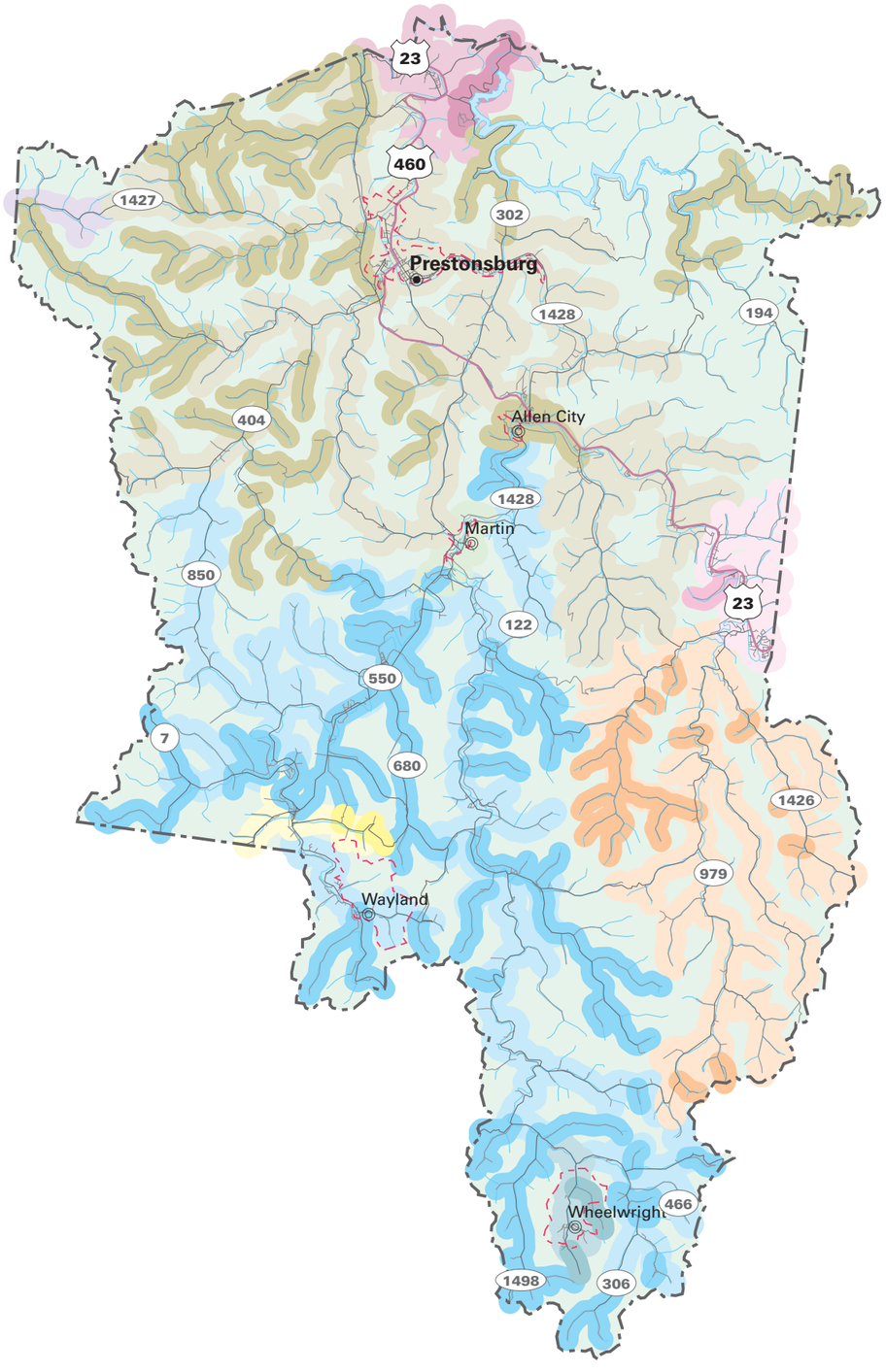

WATER SERVICE STATUS BY OWNER

EXISTING SERVICE AREA	PROPOSED SERVICE AREA	
		WHEELWRIGHT UTILITIES
		SANDY VALLEY WATER DISTRICT
		PRESTONSBURG CITY UTILITIES COMMISSION
		MUD CREEK WATER DISTRICT
		MARTIN WATER WORKS
		MAGOFFIN COUNTY WATER DISTRICT
		FRANCIS WATER COMPANY
		BEAVER ELKHORN WATER DISTRICT
		AUXIER WATER COMPANY, INC

PUBLIC WATER SYSTEMS

In 1985 there were 16 public water systems in Floyd County. Today there are 9 community water systems--including four water districts, three municipal systems, and two private companies--and 2 non-community systems. Four systems have water treatment plants, one of which relies on ground water as its sole source. Three of the systems purchase water from systems located in neighboring Pike and Johnson Counties. One water district is based in and predominantly serves Magoffin County, having only some fifty customers in Floyd County. One of the water districts is a two-county system, with a five member commission, based in Floyd County.

AUXIER WATER COMPANY

PWSID: 0360014
System Type: ..... COMMUNITY
Owner Type: ..... PRIVATE
Surface Source:
Purchase Source: ..... PRESTONSBURG CITY UTILITIES
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD): 0.00
Percent Daily Average Production: 0.00
Total Tank Storage Capacity (gallons): 50,000.00
Total Service Connections: 940.00
Number of Employees: 1.00
Treatment Operator Class: 2D
Distribution Operator Class:
Customer Rate for 1,000 Gallons: 7.96
O/M costs 1997: 354,530.00
O/M costs per Service Connection: 421.56
Net Revenue 1997: 9,062.00
Total Water Produced 1997 (gallons): 0.00
Water Sold 1997 (gallons): 67,056,000.00
Unaccounted-for Water 1997 (%): 6.61

The Auxier Water Company is a private water distribution system serving the northern most area in Floyd County and several communities in Johnson County. Potable water is purchased from the Prestonsburg City's Utilities Commission at two locations, each at a different pressure. The system has 940 service connections, with 763 residential customers in Floyd County, 68 commercial customers, and 470 customers in Johnson County. The system purchased 73,220,000 gallons and sold 67,056,000 gallons in 1997 - 12/01/97. The system has a storage capacity of 50,000 gallons. There is one full time operator, and additional contract labor is employed as required. While the system has grown from its early days as a

coal camp utility, constructed of an array of pipe materials, overall operational integrity is demonstrated by a less than 5% water loss. The consumer rate for 5,000 gallons of water is $39.80. There is significant growth potential for the system in the Johnson County portion of its service area, principally along KY Route 3.

BEAVER ELKHORN WATER DISTRICT

PWSID:	0360026
System Type:	COMMUNITY
Owner Type:	WATER DISTRICT
Surface Source:	LEVISA FORK OF BIG SANDY
Purchase Source:	
Well Source:	
Sells Water to:	
Treatment Plant Capacity (MGD):	2.00
Percent Daily Average Production:	54.00
Total Tank Storage Capacity (gallons):	1,626,000.00
Total Service Connections:	2428.00
Number of Employees:	0.00
Treatment Operator Class:	2D
Distribution Operator Class:	3A
Customer Rate for 1,000 Gallons:	4.56
O/M costs 1997:	607,196.00
O/M costs per Service Connection:	247.84
Net Revenue 1997:	53,378.00
Total Water Produced 1997 (gallons):	343,602,000.00
Water Sold 1997 (gallons):	223,995,000.00
Unaccounted-for Water 1997 (%):	13.95

The District has a recently expanded (1998) the treatment plant at Allen, Kentucky and serves the extremities of the Right and Left Beaver Creek areas which jointly comprise approximately 40%of the land mass of Floyd County. The special district has a treatment capacity of 2,000,000 gallons per day and a storage capacity of 1,626,000 gallons. The water source is Levisa Fork of Big Sandy River. An attenuated service main provides partial service to the City of Hindman in neighboring Knott County. Presently the system has 2,428 service connections: 2289 residential and 139 commercial. The community water district had operating and management costs of $607,196 and net revenue of $53,378 in 1997. The system produced 343,602,000 gallons and sold 223,995,000 gallons in 1997.

During its most recent line extension project the District assumed the water service area of the Floyd County Water and Gas System, generally including the community of Weeksbury. The majority of the distribution system is constructed of “transite” (concrete asbestos) pipe.

The use of this material, when coupled with lack of proper construction practice and inspection during the original installation, results in high, on-going management cost. A personnel complement of 12 individuals includes 4 distribution operators, 2 treatment plant operators, and support staff. There is very strong growth potential for the system in the Bill Hall Branch, the Jacks Creek area, as well as up Abner Mountain, on Left Beaver Creek and in many areas of Right Beaver, including Turkey Creek, and others. A normal growth percentage of some 15-18% is realistic for the next ten years just to meet demands along existing lines.

MARTIN WATER DEPARTMENT

PWSID: 0360272
System Type: ..... COMMUNITY
Owner Type: ..... MUNICIPAL
Surface Source:
Purchase Source: ..... PRESTONSBURG CITY UTILITIES
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD): 0.00
Percent Daily Average Production: 0.00
Total Tank Storage Capacity (gallons): 210,000.00
Total Service Connections: 424.00
Number of Employees: 2.00
Treatment Operator Class: 1D
Distribution Operator Class:
Customer Rate for 1,000 Gallons: 5.16
O/M costs 1997: ..... Not available
O/M costs per Service Connection: ..... Not available
Net Revenue 1997: ..... Not available
Total Water Produced 1997 (gallons): ..... Not available
Water Sold 1997 (gallons): ..... Not available
Unaccounted-for Water 1997 (%): ..... Not available

The Martin water system purchases treated water from the Prestonsburg Utilities Commission near the mouth of Buck's Branch on KY Route 80. The City's 423 service connections--403 residential and 20 commercial customers--are served by a renovated distribution system. However, one of two ground storage tanks is out of service, requiring total reliance on the newer tank and thereby a higher service pressure throughout the system. The municipality has a storage capacity of 210,000 gallons. The cost to the consumer for 5,000 gallons of water is $25.80. Personnel consist of a field operator and a part time clerk. The utility is operated directly by the City Council, as a department of government,

rather than via a utility commission.. Growth potential is extremely limited, in that the entire service area is surrounded by facilities of the Beaver Elkhorn Water District. Additionally, a proposed flood protection project to be developed several years in the future may allow for a modest increase and/or a decrease in the number of residential users in Martin. Either scenario has significant and serious implications for the system.

FRANCIS WATER COMPANY

PWSID:	0360152
System Type:	COMMUNITY
Owner Type:	PRIVATE
Surface Source:	ABANDONED MINE
Purchase Source:	
Well Source:	
Sells Water to:	
Treatment Plant Capacity (MGD):	0.08
Percent Daily Average Production:	0.00
Total Tank Storage Capacity (gallons):	0.00
Total Service Connections:	230.00
Number of Employees:	1.00
Treatment Operator Class:	1D
Distribution Operator Class:	2A
Customer Rate for 1,000 Gallons:	5.69
O/M costs 1997:	45,523.00
O/M costs per Service Connection:	197.93
Net Revenue 1997:	9,226.00
Total Water Produced 1997 (gallons):	15,000,000.00
Water Sold 1997 (gallons):	9,900,000.00
Unaccounted-for Water 1997 (%):	32.00

This private system includes a water treatment and distribution system for some 230 service connections--213 residential and 17 commercial customers. The system obtains its water from ground water and has a treatment capacity of 81,400 gallons per day. There is one full time employee of the system. The private water company had operating and management costs of $45,532 and net income of $9,226 in 1997. The system produced 15,000,000 gallons and sold 9,900,000 gallons for the period. Overall system losses were about 32%. Constructed to serve the community of Garrett and neighboring communities some fifty years ago, the growth potential of the system is significantly limited as its service area is completely surrounded by service facilities of the Beaver Elkhorn Water District.

MAGOFFIN COUNTY WATER DISTRICT

The District serves a small Floyd County community at the Floyd-Magoffin County line on KY Route 114 and continuing along State Road Fork toward Bonanza, KY. While the District is an extensive service provider in Magoffin County, having some 2,342 total service connections, the service it provides to this small community of 46 in Floyd County is vital, in that no other area utility has service in the vicinity. Consumer cost for 5,000 gallons of water is $29.10. Growth potential is limited in that planned extensions of the Prestonsburg system during 2000-2005 will serve those presently unserved along KY Route 114 in Floyd.

MUD CREEK WATER DISRICT

PWSID: 0360301
System Type: ..... COMMUNITY
Owner Type: ..... WATER DISTRICT
Surface Source:
Purchase Source:
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD): 0.00
Percent Daily Average Production: 0.00
Total Tank Storage Capacity (gallons): 1,100.00
Total Service Connections: 1,004.00
Number of Employees: 4.00
Treatment Operator Class: 2D
Distribution Operator Class:
Customer Rate for 1,000 Gallons: 4.93
O/M costs 1997: 269,757.00
O/M costs per Service Connection: 275.26
Net Revenue 1997: 25,000.00
Total Water Produced 1997 (gallons): 0.00
Water Sold 1997 (gallons): 60,953,000.00
Unaccounted-for Water 1997 (%): 45.41

The District's original system consists of over 80 miles of variously sized CA (concrete-asbestos) distribution lines, which were constructed in the early 1970's. Lying almost totally in the watershed of Mud Creek and its various tributaries, the major portion of the district's facilities run parallel with KY Route 979. Too-exacting design tolerances, poor construction, and lax construction inspection compromised the integrity of the system from the outset. Potable water is purchased from the City of Pikeville, via a 200,000 gallon tank sited at the head of Island Creek / Toler (Creek) Gap. Approximately one half of the system is supplied by gravity from Pikeville's Toler tank. The balance of the system is served by way of high service pumps and a series of ground storage tanks. The water district has a storage capacity

of 7,700 gallons. A revision in the system's original hydraulic plan has resulted in several tanks being taken out of service. The system has four full time personnel, including a certified distribution system operator, a clerk, and two field operators. There are presently 1,004 service connections on the system--986 residential, 18 commercial. Overall system losses were 45%. The internal growth potential of the system is significant, taking into consideration the demand to restore service to existing mains in several communities, as well as the demand for development of service to higher elevation residents using single customer, in-ground pressure tanks, conventional small, skid-mounted tanks with pumps and other similar delivery systems.

PRESTONSBURG WATER COMPANY

PWSID: 0360358
System Type: ..... COMMUNITY
Owner Type: ..... MUNICIPAL
Surface Source: ..... LEFT FORK BIG SANDY
Purchase Source:
Well Source:
Sells Water to: ..... MARTIN WATER DEPARTMENT
Treatment Plant Capacity (MGD): 5.04
Percent Daily Average Production: 51.00
Total Tank Storage Capacity (gallons): 3,055,000.00
Total Service Connections: 5,610.00
Number of Employees: 16.00
Treatment Operator Class: 2D
Distribution Operator Class: 4A
Customer Rate for 1,000 Gallons: 2.09
O/M costs 1997: ..... Not available
O/M costs per Service Connection: ..... Not available
Net Revenue 1997: ..... Not available
Total Water Produced 1997 (gallons): ..... Not available
Water Sold 1997 (gallons): ..... Not available
Unaccounted-for Water 1997 (%): ..... Not available

The City of Prestonsburg develops, operates and maintains an extensive municipal water service utility. A treatment plant with design capacity of some 5mgd presently operates at 60% of that capacity. The community has storage capacity of 3,054,800 gallons. Over the last several years the city has acquired the Bull Creek-Water Gap Water District, the Abbott-Little Paint Creek Water District, the Middle Creek Water Association, the Prater Creek Water District, the Allen Water System, and the David Water District. Additionally, the system sells water to the Auxier Water System, the Sandy Valley Water District, and the

City of Martin. The city has recently extended service into the Cow Creek and Buffalo communities northeast of the city. Collectively, the city provides service to some 5,627 connections, including 4, 977 residential and 650 commercial customers. The Commission has 16 employees dedicated to the operation and maintenance of its water system, including 5 certified distribution system operators, and 7 certified treatment plant operators. The in-city customer cost for 5,000 gallons is $10.45. The rate for 5,000 gallons of water for customers living outside of Prestonsburg is $16.03.

The growth potential of the system is significant, due both to increased housing and commercial development along existing service mains as well as for new development as extensions to these areas. The City participates in an inter-local cooperation agreement relating to utility services, specifically water service, to the new federal prison. Joining the Martin County Water District and the City of Paintsville, water and wastewater services will be made available for the Honey Branch Industrial Park, located in Martin County, Kentucky. The first tenant will be the Federal Bureau of Prisons. Additionally, the Commission is now developing service to an extensive housing, recreational, and industrial development complex on a mountain top site lying parallel and adjacent to Dewey Lake, near Jenny Wiley State Resort Park.

The Prestonsburg City's Utilities Commission has commissioned plans for the development of a 5mgd raw water intake, pumping station and transmission main from Dewey Lake at Brandy Keg extending to its existing water treatment plant at Lancer. The City has applied for emergency water withdrawal from the U.S. Army Corps of Engineers.

Preliminary engineering studies anticipate a construction cost of $765,000 for the complete Intake Facility. Estimates for a raw water transmission system from the Lake supply to the water treatment plant call for 14,200 LF of 20-inch PVC and 1,200 LF of 20-inch ductile iron pipe and other appurtenances for a construction estimate of $576,200. Total Cost for intake and transmission main is $1,341,200

SANDY VALLEY WATER DISTRICT

PWSID: 0360384
System Type: ..... COMMUNITY
Owner Type: ..... WATER DISTRICT

Surface Source:
Purchase Source: ..... PRESTONSBURG CITY UTILITIES
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD): 0.00
Percent Daily Average Production: 0.00
Total Tank Storage Capacity (gallons): 700,000.00
Total Service Connections: 2,281.00
Number of Employees: 7.00
Treatment Operator Class: 2D
Distribution Operator Class:
Customer Rate for 1,000 Gallons: 3.86
O/M costs 1997: 568,332.87
O/M costs per Service Connection: 276.97
Net Revenue 1997: 21,791.06
Total Water Produced 1997 (gallons): 0.00
Water Sold 1997 (gallons): 174,317,300.00
Unaccounted-for Water 1997 (%): 20.59

The District consists of some 48 miles of service mains extending along US 23 from Mare Creek in Floyd County to the Thompson Road area in Pikeville, including many of the communities located on tributaries of the Levisa Fork of the Big Sandy River in this area. Constructed in the late 1960's and early 1970's, using AC (asbestos-concrete) pipe, the system serves a major commercial shopping area in both Floyd and Pike Counties. The bi-county district purchases treated water from both the City of Pikeville and the City of Prestonsburg to service its 2,281 connections (2,005 residential and 276 commercial). The Special District has a storage capacity of 300,000 gallons. There are seven employees of the District, one certified distribution system operator, two office staff, and four field staff. There is significant potential for system growth, both along the existing service corridor and through development of service mains to serve the communities located along the tributaries of the Levisa Fork.

WHEELWRIGHT UTILITY COMMISSION

PWSID: 0360463
System Type: ..... COMMUNITY
Owner Type: ..... WATER DISTRICT
Surface Source: ..... UNDERGROUND MINE
Purchase Source:
Well Source:
Sells Water to:
Treatment Plant Capacity (MGD): 0.35
Percent Daily Average Production: 31.00
Total Tank Storage Capacity (gallons): 200,000.00
Total Service Connections: 358.00

Number of Employees:..... 5.00
Treatment Operator Class:.....1D
Distribution Operator Class:.....2A
Customer Rate for 1,000 Gallons:.....Not available
O/M costs 1997:.....Not available
O/M costs per Service Connection: .....Not available
Net Revenue 1997:.....Not available
Total Water Produced 1997 (gallons):.....Not available
Water Sold 1997 (gallons):.....Not available
Unaccounted-for Water 1997 (%): .....Not available

The City of Wheelwright, a sixth class municipality in the southern tip of Floyd County owns and operates a water treatment and distribution system to serve its 324 connections: 309 residential and 15 commercial. The Utility Commission has a treatment capacity of 350,000 gallons per day and a storage capacity of 200,000 gallons. The system has two employees, one of which is a certified water treatment plant operator and a distribution system operator. The system was first constructed to serve the model "coal camp town" in the late 1930's, was renovated in the mid 1950's, and then once again in the early 1980's. In this latest refurbishing, PVC pipe was installed and an individual meter setting was installed at each service connection. The water source is Wheelwright Mine. Because the water source is an underground reservoir (part of the old mine works) raw water turbidity is extremely good. However, spikes in sodium levels and volume fluctuations in the reservoir, consequent upon periodic drought conditions, have prompted the construction of a permanent tie-in with the Beaver Elkhorn Water District, now in-place

Potential for system expansion is extremely limited, and will include Branham Hollow and Golf Course Hollow. All communities around Wheelwright are either presently served by the Beaver Elkhorn Water District or will be served by that system.

OTHER SYSTEMS

CORPS OF ENGRS/DEWEY LAKE

Corps Of Engrs/Dewey Lake facility is located in Floyd county and serves a population of 80 with 44 service connections. The federal facility has a treatment capacity of 40,000 gallons per day. The water source is Dewey Lake. The system had an operating and management cost of $141,000 and net revenue of -$3,900 for the period 07/01/97 - 06/30/98.

CAMP SHAWNEE

Camp Shawnee is located in Floyd County and serves a population of 25 with 2 service connections. The non-community system has a treatment capacity of 34,560 gallons per day. The water source is Dewey Lake.

PRIVATE DOMESTIC SYSTEMS

About 14,000 people in Floyd county rely on private domestic water supplies: 12,900 on wells and 1,100 on hauled water, cisterns and other sources.

Some wells in the relatively thick sandy alluvium that is present along much of the Levisa Fork produce 20 to 25 gpm, which is more than adequate for domestic supplies. More than three-quarters of the wells drilled in valley bottoms and almost three-quarters of the wells drilled on hillsides are adequate for domestic supply needs. Only some wells on hilltops and ridges are adequate for domestic needs. Drilled wells more than 200 feet deep in valleys may yield enough water for small municipal or industrial supplies.

Ground water obtained from most wells is moderately hard and contains noticeable amounts of iron. In the northwestern two-thirds of the county, salty water may be found in wells less than 100 feet below the level of the principal valley bottoms. A few springs supply sufficient quantities of water for domestic use, usually produces less than 5 gpm.